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**United States Patent** [19][11] **Patent Number:** **5,822,319****Nagami et al.**[45] **Date of Patent:** **Oct. 13, 1998**

[54] **ROUTER DEVICE AND DATAGRAM  
TRANSFER METHOD FOR DATA  
COMMUNICATION NETWORK SYSTEM**

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#### [57] **ABSTRACT**

A router device realizing a datagram transfer method for improving the datagram transfer efficiency by ascertaining the transfer target and/or the requested quality of service without referring to the datagram content. The router device has network interfaces connected with networks including at least one virtual connection oriented network, a table for registering a correspondence between a virtual connection identifier and a transfer target network interface and/or a quality of service, a connection identifier analysis unit for determining a transfer target network interface and/or a quality of service for a datagram entered from one virtual connection, by referring to the table according to a virtual connection identifier of that one virtual connection. The datagram can be transferred to the determined transfer target network interface, while applying a priority control for datagrams to be transferred by the router device according to the determined quality of service.

**38 Claims, 17 Drawing Sheets**

